

REMARKS

In the final status office action, the examiner persists with the prior rejection of claims 1-4, 6-11, 13 and 14 under 35 USC 102 as anticipated by Pieciak,

Applicant's arguments of the prior amendments are incorporated herein by reference.

In disagreeing with the distinction pointed out in the last amendment that Pieciak does not teach the claimed structure providing the order of flow through the first glass paper and then through the second non-woven fabric filter media, on page 4, first paragraph of the office action, the examiner argues (1)....."Pieciak teaches that 'at least one layer of boro-silicate glass filter paper being wrapped around the cylindrical support' (see the Abstract)", and (2) "or inherently, a multiple layer of glass filter papers or alternate layers can (emphasis added) be incorporated either on the upstream or on the downstream or both sides of the nonwoven fabric support layer since the support paper has a function of supporting the flimsy and fragile glass paper filter."

In contending the examiner's first statement (1), applicant argues that the wording "at least one layer" does not imply that the location of the layer 7 can be changed to the inlet side of glass paper layer 6, but is explained by the statement in col 2, lines 42-46, "Boro-silicate glass paper 6 is wrapped around the porous support at least once , and preferably as many times as is necessary to provide a thickness which will achieve the desired degree of filtering (emphasis added) " which clearly means only that many turns may be made on the porous support to increase total thickness for effective filtering, and does not imply that the position of the glass paper layer on the porous support can or should be changed.

In contending the examiner's second statement (2), applicant argues that the

reference actually only teaches only that the (outer) non woven fabric support layer 7 is on the inlet side of the glass filter paper. The function as a support is not relevant to the question of anticipation. Any possibility of the layer being on the outlet side is a speculative construction by the examiner - not inherent in the teaching of the reference considered properly as a whole.

Furthermore, the reference specifies in col 3, line 12 that the layer 7 is a prefilter entirely, which function would not be possible if the layer 7 were on the outlet side of the glass paper 6. In addition, it appears that the layer 7 is secured on the layer 6 by a zipper which would not seem possible if, contrary to the teaching of the reference, the layer 7 were to be located inside the layer 6.

Thus, claims 1-4, 6-11, 13 and 14 cannot be considered to be anticipated by Pieciak and the rejection is inappropriate.

Concerning the rejection of obviousness over Shimoda, it is again pointed out that the examiner persists in the mistake of confusing diameter of metal fibers 2a and 2b with diameters of pores. Metal fibers are solid, pores are openings.

It is clear to the applicant that, notwithstanding any dictionary definition of the word 'fluids' as relating generally to flowable materials, the whole teaching of the primary reference is directed to the separation of atomized particles of oil from air (e.g. col 1, line 48-50): "It is one object of the invention to provide a filter cartridge which is highly efficient in removing oil from an air and oil mixture".

The secondary reference Shimoda does not use the term 'fluids' and, in contrast to the teaching of the primary reference, considered properly as a whole, the secondary reference is specifically concerned with the removal of solid particulates such as soot from exhaust gases and semiconductor manufacturing processes (col 1, lines 14 and 17). The whole teaching is directed to reduction of corrosion by using metal fibers

(solids) of large diameters on the inlet and outlet sides of the filter material. The reference does not even mention pore or aperture size in contrast to claims 15-18.

Properly considered as a whole, Shimoda does not even teach wetting as the teaching is concerned only with solid particulates such as soot, while the primary reference Pieciak is not concerned with corrosion resistance as, oil does not have a corrosive effect on borosilicate glass paper

Furthermore, oil droplets exposed to the high temperatures experienced in internal combustion exhaust would rapidly crack and oxidize.

It must therefore be manifestly clear that a man of ordinary skill seeking to improve the oil mist filtering technology taught by the primary reference would not even address the teaching of the secondary reference as it concerns the problem of corrosion resistance at temperatures so high that any oil droplets would be destroyed. Even if Shimoda were addressed, the Shimoda teaching only considers fibre diameter, not the claimed pore diameter.

Thus, applicants' position remains that the documentary evidence shows that the technician would not be motivated to address the teaching of the secondary reference, properly considered as a whole, for a solution to improve the teaching of the primary reference, properly considered as a whole. The only motivation for the isolation of an element in the secondary reference and substitution in the primary reference could have arisen from impermissible hindsight analysis by the examiner having already seen the solution provided by the claimed invention, which amounts to inadmissible mosaicing.

As pointed out above, even if such improper substitution were attempted, the claimed invention would not result.

The examiner's assertion that it would be obvious to provide a filtration material with the wetting ability as taught by the secondary reference in the filter apparatus of the primary reference is also unconvincing as , inter alia, the whole teaching of the secondary reference is not concerned with filtering out a liquid but with (dry) particulate material where 'wetting' is clearly not a factor and corrosion resistance in a corrosion sensitive metal filter arising from hot exhaust gases would also not be a factor in a glass paper filter material employed to remove oil mist from gas, as corrosion is not an issue and, in addition, the oil would be destroyed by the high temperatures environment taught by the secondary reference.

In the rejection of claims 19-22 under 35 USC 103 over Pieciak , in view of Shimoda and further in view of Kahlbaugh, the examiner states that the tertiary reference Kahlbaugh et al has a pore diameter whereas the reference actually refers to a fiber diameter.

Apparently, the examiner has again mistaken the 'fibre ' which requires a presence of material, for the word 'pore' which has an opposite meaning, an opening or absence of material. Furthermore, Kahlbaugh is only concerned with the filtering of solid particulates.

As pointed out in the prior response and above, the applicant believes the proposed isolation and combination/substitution of elements of the teachings of the primary reference and the secondary reference to be inappropriate and furthermore, compounded by the inappropriate equation of the words 'fibre' and 'pore' in the tertiary reference and the sole concern of the secondary reference with filtering sold particles irrelevant to wetting property.

The rejection of claims 19-22 under 35 USC 103 cannot, therefore, be sustained.

Accordingly it is submitted that the examiner's rejection is inappropriate and that the claims define patentable subject matter.

Favorable reconsideration of the application is requested.

Respectfully submitted,

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